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\*Estimates of Damage to Corn by the European Corn Borer in 1945

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It is estimated that the European corn borer in 1945 caused a loss of about \$36,700,000 to the corn crop valued at approximately \$1,174,100,000 grown in the northeastern part of the United States and including sizable portions of the Corn Belt as far west as central Iowa. These estimates are derived from survey data obtained in cooperation with State agencies on the relative abundance of the insect in the fall of 1945 in 398 counties in 22 States out of a total of 888 counties in the country known to be infested. It is probable that the estimates include at least 90 percent of the total current loss caused by the pest in the United States. However, it is believed that they are very conservative in view of the increased corn acreages and higher yields of the last several years which were not considered in the preparation of the figures. In 1944, on a somewhat comparable basis, the estimated loss to corn amounted to about \$22,700,000.

The 1945 estimates were made by the same procedure used in the preparation of similar estimates in previous years, as follows: (1) Established damage indices of 3-, 5-, and 8-percent loss per borer per plant in corn for grain, canning sweet corn, and market sweet corn, respectively, were applied to populations of the insect found in each county surveyed in the fall of 1945 to obtain percentages of loss in the types of corn represented. (2) Values of the corn crop in each county were estimated, and the monetary loss caused by the borer was calculated by applying to them the estimated percentages of loss. To obtain these values, data on corn production were taken from the agricultural census of 1940 and to a limited extent from that of 1945, and current market prices were obtained from reports of the Bureau of Agricultural Economics and the Agricultural Marketing Administration of the U. S. Department of Agriculture, and from various State and city organizations which generously supplied information. (3) The county data were combined to show the monetary loss of corn for grain and of sweet corn, for each State and for the surveyed area as a whole.

The 1945 estimates of damage are presented in table 1. They were prepared on the basis of 15,968,983 acres of corn for grain, with an estimated crop value of \$1,141,649,989, and 306,702 acres of sweet corn, with an estimated crop value of \$32,498,410. The combined acreage of grain and sweet corn was 16,275,685 and the estimated crop value of both totaled \$1,174,148,399. The estimated total loss caused by the European corn borer to the corn crop in the area surveyed in 1945 was \$36,764,565. Of this amount 89.3 percent, or \$32,846,459 occurred in corn harvested for grain, and 10.7 percent, or \$3,918,106 in sweet corn.

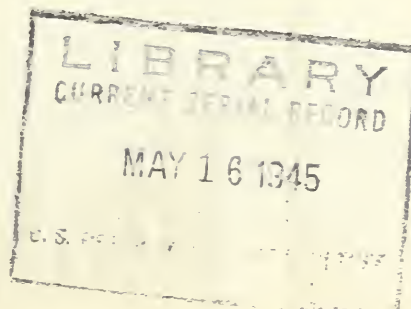




Table 1.--Estimates of damage by the European corn borer to corn harvested for grain and to sweet corn in the 398 counties surveyed in 1945 of the 888 counties known to be infested.

Corn harvested for grain										Sweet corn				Total	
State	Counties	Extent of area surveyed	Estimated value of crop	Estimated loss of crop value	Extent of area surveyed	Estimated value of crop	Estimated loss of crop value	Total estimated loss of crop value	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	
Connecticut	8	8,350	541,334	27,924	3,275	1,100,400	208,722	236,646							
Delaware	3	134,850	4,425,027	134,740	3,573	349,320	17,149	151,889							
Illinois	34	3,855,846	400,272,189	12,148,959	60,981	3,460,784	371,022	12,519,981							
Indiana	69	3,421,704	269,749,058	10,612,363	27,149	2,210,684	176,064	10,788,427							
Iowa	35	2,719,721	163,722,620	2,842,663	5,531	237,868	6,809	2,849,472							
Kentucky	3	44,613	1,640,414	10,687	0	0	0	10,687							
Maine	14	4,935	304,365	5,921	8,728	878,808	34,325	40,246							
Maryland	14	274,631	11,931,420	685,343	17,990	852,256	103,878	789,221							
Massachusetts	4	2,217	123,443	3,141	2,872	689,280	146,143	149,284							
Michigan	6	197,116	9,426,505	153,257	4,872	896,448	42,881	196,138							
Minnesota	16	870,655	45,884,119	20,172	20,985	757,969	600	20,772							
Missouri	12	501,126	19,674,094	50,206	1,029	172,872	2,374	52,580							
New Hampshire	9	2,992	195,039	1,572	1,673	402,720	7,318	8,890							
New Jersey	19	126,241	6,388,923	329,952	20,721	7,960,354	1,324,738	1,654,690							
New York	20	102,173	5,196,950	98,354	27,357	4,340,359	614,585	712,939							
North Carolina	3	50,122	1,774,457	1,557	352	84,480	84	1,641							
Ohio	30	1,612,504	96,407,537	2,293,279	14,505	1,553,137	96,973	2,390,252							
Pennsylvania	33	820,530	45,677,488	2,272,662	21,698	3,421,531	661,444	2,934,106							
Rhode Island	1	907	33,702	3,556	41	9,840	2,768	6,324							
Vermont	11	5,979	337,232	2,655	1,311	142,215	2,261	4,916							
Virginia	14	219,438	9,420,744	277,272	782	187,680	3,810	281,082							
Wisconsin	40	992,333	48,523,329	870,224	61,272	2,789,405	94,158	964,382							
Total	398	15,968,983	1,141,649,989	32,846,459	306,702	32,498,410	3,918,106	36,764,565							